

**BUREAU OF HIGHWAYS  
REQUEST FOR PROPOSAL  
for  
QUALIFICATIONS BASED SELECTION FOR PREQUALIFIED SERVICES**

The Michigan Department of Transportation (MDOT) is seeking professional services for the project contained in the attached scope of services.

If your firm is currently prequalified for this type of work and you are interested in providing services, please indicate your interest by submitting a Proposal. The Proposal must be submitted in accordance with the latest "Vendor Selection Guidelines for Service Contracts", available on the MDOT website.

For efficiency sake, we are asking that the vendor firm provide 5 paper copies of the Proposal to the MDOT project manager named in the attached scope of services.

These copies must be received by Wednesday, April 15, 2005, at 3 P.M. Fax and electronic copies are not acceptable.

In addition, provide one unbound copy to:

Regular Mail:

Secretary, Operations Contract Support  
Michigan Department of Transportation  
P.O. Box 30050  
Lansing, MI 48909

OR

Overnight Mail:

Secretary, Operations Contract Support  
Michigan Department of Transportation  
425 W. Ottawa  
Lansing, MI 48933

This copy is to be received within three working days after the due date and time specified above. Please do not deliver in person.

Any questions relative to the scope of services must be submitted by e-mail to the MDOT project manager. Any questions must be asked at least three working days prior to the due date and time specified above. All questions and their answers will be placed on the MDOT website as soon as possible after receipt of the questions. The names of vendors submitting questions will not be disclosed.

For a cost plus fixed fee contract, the selected vendor must have a cost accounting system to support a cost plus fixed fee contract. This type of system has a job-order cost accounting system for the recording and accumulation of costs incurred under its contracts. Each project is assigned a job

number so that costs may be segregated and accumulated in the vendor's job-order accounting system.

The selection team will review the information submitted and will select the firm considered most qualified to perform the engineering services based on the proposals. The selected vendor will be contacted to confirm capacity. Upon confirmation, that firm will be asked to prepare a priced proposal. Negotiations will be conducted with the firm selected.

**The maximum allowable pages for your proposal shall follow the guidelines detailed in Exhibit F of the Vendor Selection Guidelines (October 2004) for over \$500,000.**

MDOT is an equal opportunity employer and MDOT DBE firms are encouraged to apply. The participating DBE firm, as currently certified by MDOT's Office of Equal Opportunity, shall be listed in the Proposal.

The scope of services is attached to this solicitation.

**SCOPE OF SERVICES**  
**for**  
**VENDOR CONSTRUCTION STAKING AND CONSTRUCTION ASSISTANCE**

**I. Primary Prequalification Classification:**

**Construction Services, Inspection & Testing Services:**

Construction Staking  
Road Design Survey  
Structure Survey

**II. Project Description and Project Manager Designation**

Provide staking services as needed for road construction and bridge rehabilitation work which will include performing staking services during construction and office work to close project out ("finaling") after construction for the surveying work performed.

The surveyors shall work under the direction of the Project Manager. Vendor services will be performed on various projects. Additional projects may be added as directed by the Project Manager. Vendor services may be needed full time or at various given times (overtime may be necessary), beginning May 1, 2005 and continuing through May 1, 2006.

MDOT Project Manager:     Gorette Yung, P.E.  
                                  Michigan Department of Transportation  
                                  Taylor Transportation Service Center  
                                  25185 Goddard Road  
                                  Taylor, MI 48180  
                                  Phone: 313-375-2413

The vendor shall contact the Project Manager prior to beginning any work on this project.

**III. Construction Services, Construction Staking**

1.     This Scope of Services consists of performing all construction staking operations that are to be performed by "the Engineer" as indicated in the Special Provision for Staking Bridges in combined Bridge/Road Projects using Contractor Staking SP104(A), the Special Provision for Contractor Staking and the MDOT 1996 Standard Specifications, 2003 Interim Standard Specifications and or the 2003 Standard Specification for Construction. On projects that contain a bridge portion and the Contractor Staking provisions have been removed the vendor will be responsible for setting all grades, elevations etc necessary for construction of the bridge as determined by the Project Manager.

Right of Way staking, establishing horizontal and vertical control points, and establishment of bench marks shall be performed by the Vendor. Vendor services will begin upon approval for vendor services from MDOT. No work is to start on this contract until approval is

received.

2. The Vendor shall furnish all services and labor necessary to conduct and complete the Vendor Construction Staking Services described herein. The Vendor shall also furnish all materials, equipment, supplies, and incidentals necessary to perform the Services (other than those designated in writing to be furnished by the Department), and check and/or test them prior to use in carrying out this work.
3. The Vendor's principal contact with the Department shall be through the designated Project Manager.
4. Since the Services described herein are financed in whole or in part with Federal or State funds, the Services shall comply with all applicable Federal and State laws and regulations.
5. At the request of the Department, the Vendor, during the progress of the Services, shall furnish information or data relating to the Services described herein and may be required by the Department to enable it to carry out or to proceed with related phases of the Project not described herein, or which may be necessary to enable the Department to furnish information to the vendor upon which to proceed with further Services.
6. The Vendor agrees to become familiar with the standard construction practices of the Department; the Project-specific construction contracts, proposal, and plans; the Standard Specifications for Construction and all applicable publications referenced within; the Michigan Construction Manual; and any and all other references, guidelines, and procedures manuals needed to carry out the work described herein in appropriate manner.
7. The Vendor is responsible for verifying all plan grades, sewer invert and outlet grades, top of casting grades and all other necessary grades for construction of project prior to staking.
8. The surveyor(s) shall provide their own transportation to, from, and on the project site to perform the services outlined herein.
9. The surveyor(s) shall have all equipment necessary to provide detailed drawings, profiles etc when requested by the Engineer.
10. The surveyor(s) shall be proficient working with metric and english units.
11. The surveyor(s) shall wear personal safety equipment in accordance with MIOSHA and MDOT requirements and practices while on the project site.
12. The surveyor(s) shall attend all project related meetings, when directed by the Project Manager.

#### **COORDINATION PROCEDURES:**

In addition to specific responsibilities outlined above for the Vendor and/or Project manager, the following Coordination Procedures shall also be adhered to by both the Vendor and/or Project

Manager.

**FOR THE VENDOR:**

1. The Project Manager shall be immediately notified of any staking requests which may be received by the Vendor directly from the Construction Contractor.
2. All overtime for the Vendor must be authorized by the Project Manager prior to the start of the work by the Vendor.
3. The Vendor shall return to the Project Manager at the completion of this Agreement any and all Project-specific materials and documents furnished to the vendor by the Project Manager.
4. The Vendor shall provide original and final plotted cross sections and final volume calculations of a format meeting the prior approval of the Project Manager for all earthwork, undercuts, muck excavation, swamp backfill, and topsoil stripping and will determine final quantities for these items by plan sheet breakdown. Intermediate plotted cross sections will be provided by the Vendor to verify interim earthwork quantities when requested by the Department. The Vendor shall also provide to the Project Manager a final "as constructed" full sized set of paper plans documenting all changes of vertical and horizontal alignment, all drainage and subsurface changes, and other miscellaneous changes.
5. Staking documentation and field notes shall be legally bound, signed, checked, dated and provided by the Vendor in a neat and orderly manner as approved by the Project Manager prior to the start of the related work. The field notes and grade computation documents shall become the property of the Department upon completion of the work. The field notes and computation documents may be inspected by the Department at any time. Failure to provide the field notes and grade computation documents upon completion of the work could result in non payment for vendor services.
6. The Vendor shall supply all stakes, survey equipment, personnel and other devices necessary for checking, marking, preserving and maintaining all points, lines and grades. Stakes will be set and marked in a manner that will permit checking of the work.
7. The Vendor shall be responsible for any errors that occur on the project due to a staking error. The Vendor will be responsible to compensate MDOT for the additional costs incurred due to a staking error on the project. At such time the error is discovered MDOT will meet with the Vendor to discuss options to rectify the error. Once final costs are received from the Contractor for the additional work to rectify the problem MDOT will forward a copy to the vendor for reimbursement.
8. If at anytime MDOT can perform the surveying operations the contract will be void and MDOT will resume all staking duties with no compensation given to the vendor.

9. At anytime throughout the vendor contract MDOT may supply a person to be utilized on the staking crew. The person will still work for MDOT and be paid by MDOT for all hours worked.

#### **FOR THE PROJECT MANAGER**

1. The Project Manager shall determine if a staking error or omission has occurred. The Project Manager will notify the Vendor in writing within 10 business days of the error or omission.
2. The Project Manager shall furnish to the Vendor all project-specific construction contracts, proposals, plans, shop drawings, plan revisions, written instructions, and other information and/or data as deemed necessary by the Project manager for the Vendor to perform the services required herein.

#### **IV. Design Services, Surveying**

Survey Mapping Limits: As needed for Design

**NOTES:** The vendor surveyor shall discuss the scope of this survey with the vendor design engineer before initiating any work on this project. A detailed Survey Work Plan with an estimate of hours by specific survey task such as traversing, leveling, mapping, etc., **must** be included in the project proposal.

It is the responsibility of the Professional Surveyor to safeguard all corners of the United States Public Land Survey System, published Geodetic Control and any other Property Controlling corners that may be in danger of being destroyed by the proposed construction project.

#### **GENERAL REQUIREMENTS:**

1. Surveys must comply with **all Michigan law** relative to land surveying.
2. Surveys must be done under the **direct supervision** of a Professional Surveyor licensed to practice in the State of Michigan.
3. Work in any of the following categories of survey: Road Design, Bridge, Right-of-Way, Ground Control (Photogrammetric), and/or Geodetic control, must be completed by a survey firm which is pre-qualified by MDOT.
4. Surveys must meet all requirements of the Michigan Department of Transportation (MDOT) Design Surveys *Standards of Practice* dated April 1, 1998. Please contact the Design Survey office to clarify any specific questions regarding these standards.
5. Vendors must obtain all necessary permits, including an up-to-date permit from the MDOT Utilities Coordination and Permits Section, required to perform this survey on any public and/or private property.

6. The vendor must adhere to all applicable OSHA and MIOSHA safety standards, including the appropriate traffic signs for the activities and conditions for this job.
7. Vendors are responsible for a comprehensive and conscientious research of all records, including MDOT records, essential for the completion of this project.
8. Measurements, stationing, recorded data, and computations must be in metric units, unless specified otherwise by the Project Manager.
9. Coordinate values shall be based upon the Michigan State Plane coordinate system NAD83. This requirement *may* be waived if GPS is not available. If terrestrial traverse methods are employed, and NGS control is not available within 6 km., a local project coordinate control system may be accepted. All elevations must be based upon the North American Vertical Datum of 1988 (NAVD88) if control is available within 6 km. If not, existing MDOT plan datum is acceptable. Other datums must be approved by the MDOT Design Division, Supervising Land Surveyor. A preliminary submittal of the adjusted Horizontal and Vertical control for the project may be submitted to the Survey Vendor Project Manager for review and acceptance as soon as it is available.
10. The survey notes must be submitted to the Design Survey Unit in 10" (254 mm) by 12" (305 mm) divided portfolios with flap covers. As many portfolios should be used as needed to contain all of the required documents and diskettes

11. Each portfolio must be labeled on the outside as in the following example:

Survey Notes for:

Route, Location and Project Limits [I-94 under Beaubien Street]

Control Section [S06-82024] Job Number [45197D] Date [ *of submittal*]

By [ *Name of Firm* ]

Michigan Professional Surveyor [ ] License # [ ]

12. Each submittal is to be divided into five sections. These sections are to be labeled as follows: **Administrative, Alignment, Control, Property, and Miscellaneous**

- a. The administrative section will include the following items: a completed copy of the MDOT Form 222(3/99) entitled "SURVEY NOTES: RECEIPT AND TRANSMITTAL"; the limits of the survey and original survey scope as determined by the vendor Surveyor and Design Engineer; a complete synopsis of the survey **that shall include, but not be limited to** horizontal and vertical control datums used, methodology, a complete discussion of government corners recovered, perpetuated or otherwise used as part of the survey, problems encountered, and a statement of certification from the vendor surveyor supervising the project as to compliance with Michigan Department of Transportation (MDOT) Design Surveys *Standards of Practice* dated April 1, 1998; as well as documentation of all project specific meetings and /or conversations with MDOT Survey personnel.

- b. The Alignment section will contain a sketch of the alignment, witnesses and stationing of alignment points set or found; an explanation of how the alignment was determined, whether best fit or legal; and all supporting documentation.
  - c. The Control section contains the data collected and copies of all research documents used to establish the **horizontal and vertical** reference systems for the project, and includes a thorough written explanation describing how the systems were established. This section should also contain a complete list of control coordinates, control traverse raw data, least squares analysis for both traverse and benchmarks, a separate listing of control point coordinates and witnesses for mapping and construction staking of the project. A complete Benchmark list with datum, station and offset, elevation, and description of each benchmark shall also be included. This information must be submitted in hardcopy and ASCII electronic file format on 88.9 mm (3.5") HD diskettes. Also, a sketch of the control traverse, showing any ties (government corners, property, alignment, etc.) shall be included in this section.
  - d. The Property section contains all information that is utilized regarding the real property affected by the project, and all necessary property ties. This may include copies of all **recorded** land corner recordation certificates for the government corners used or reestablished, recorded plats, recorded certified surveys, tax maps, tax descriptions, and adjacent/riparian owners.
  - e. The Miscellaneous section contains any information not included in the previous sections. The surveyor=s project report should specify any items included in this section.
13. A portfolio may contain several types of data but, no section is to contain more than a single type (i.e., Bridge surveys separate from Road surveys and Hydraulic surveys). All sheets in a portfolio must be marked with the control section, job number, portfolio section name and page number. Diskettes must be labeled with the control section, job number, data type and file names.
14. The Vendor representative shall record and submit typewritten minutes for all project related meetings to the MDOT Project Manager within two weeks of the meeting. The Vendor shall also distribute the minutes to all meeting attendees.
15. The MDOT Project Manager is the official contact for the Vendor. The Vendor must either address, or send a copy of all correspondence to the MDOT Project Manager. The MDOT Project Manager shall be made aware of all communications regarding this project. Any survey related questions, in regard to this project, should be directed to a Survey Vendor Coordinator.

At the completion of this survey and prior to beginning the design of this project, all field survey notes, all electronic data, and all research records obtained for this project will be considered the property of MDOT and **must be sent to:**



John LaRock  
MDOT-Metro Region  
18101 W. Nine Mile Road  
Southfield, MI 48075

Please use MDOT's Form 222(3/99) entitled "SURVEY NOTES: RECEIPT AND TRANSMITTAL" for all transmittals. A copy of this transmittal form must also be sent to the Project Manager. It is highly recommended that the project's survey portfolios be submitted for review as soon as possible.

#### **FIELD SURVEY:**

The purpose of the field survey is to obtain all information and data required by the project design engineer, to leave control in the field for future construction staking, and to provide a sufficient history of the area to enable the MDOT Design Survey Unit to perform dependable surveys in the future. The vendor surveyor must discuss the scope of this survey with the project design engineer before initiating any work on this project. Notes of this meeting and a detailed Survey Work Plan with an estimate of hours broken down by specific survey task must be submitted to the Project Manager and Vendor Coordinator within two weeks of this meeting.

The vendor surveyor must contact the County Remonumentation Representative prior to beginning work on the project to inform him of proposed corner perpetuation activities, and to obtain information pertinent to PLSS corners and/or property controlling corners affected by project construction.

#### **FINAL REPORT: DELIVERABLES**

The final report for this project shall include the following:

1. In the first pocket of the first portfolio, MDOT's Form 222(3/99) entitled "SURVEY NOTES: RECEIPT AND TRANSMITTAL", and the project's Professional Surveyor's Report on company letterhead consisting of the following:
  - a. A comprehensive report, written and signed by the project's Professional Surveyor, of the work performed on this project.
  - b. The source and the methods used to establish the project horizontal coordinates, elevations, and the alignment(s) for this project.
  - c. A detailed explanation of anything discovered during the survey of this project that may create a problem for the designer or another surveyor.
2. Coordinate and witness lists for the horizontal alignment ties, government corners, traverse control points, and bench marks.
3. A sketch of the alignment with reference points and angle of crossing (if appropriate), horizontal coordinates, curve data, and a station equation to existing stationing in feet.

4. Least squares analysis for horizontal and vertical control.
5. Documentation of horizontal and vertical datum sources.
6. Control sketch with control points, government corners and alignment plotted.
7. All field survey notes, all electronic survey data files, all calculation sketches, and all research records obtained for this project. All electronic survey data files shall be submitted on 88.9 mm (3.5") HD diskettes only, specifically labeled. No paper copy of raw survey data is required.
8. Legible copies of all **recorded** Land Corner Recordation Certificates (with Liber and Page number) filed or used for the performance of this survey, and for any PLSS corners, including Property Controlling Corners, which may be disturbed by construction.
9. It is the responsibility of the vendor to insure that all electronic files submitted to MDOT conform to the required format and all documents are legible.
10. The vendor must organize and label the various sections of the portfolios as required by the MDOT Design Surveys *Standards of Practice* dated April 1, 1998.
11. It is not necessary to submit mapping data in the survey portfolio for a vendor survey/vendor design in the same authorization.

#### **IV. Vendor Payment**

All invoices/bills for services must be directed to the Department and follow the 'then current' guidelines. The latest copy of the "Professional Engineering Service Reimbursement Guidelines for Bureau of Highways" is available on MDOT's Bulletin Board System. This document contains instructions and forms that must be followed and used for invoicing/billing; payment may be delayed or decreased if the instructions are not followed.

Payment to the Vendor for Services rendered shall not exceed the "Cost Plus Fixed Fee Not to Exceed Maximum Amount" unless an increase is approved in accordance with the contract with the Vendor. All invoices/bills must be submitted within 14 calendar days of the last date of services being performed for that invoice.

Direct expenses will not be paid in excess of that allowed by the Department for its own employees. Supporting documentation must be submitted, with the invoice/bill, for all billable expenses on the Project. The only hours that will be considered allowable charges for this contract are those that are directly attributable to the CE activities of this Project. Hours spent in administrative, clerical, or accounting roles for billing and support, are not considered allowable hours; there will be no reimbursement for these hours.

Reimbursement for overtime hours will be limited to time spent on this project in excess of forty hours per week. Any variations to this rule should be included in the price proposal.

## **V. Vendor Payment**

All invoices/bills for services must be directed to the Department and follow the 'then current' guidelines. The latest copy of the "Professional Engineering Service Reimbursement Guidelines for Bureau of Highways" is available on MDOT's Bulletin Board System. This document contains instructions and forms that must be followed and used for invoicing/billing; payment may be delayed or decreased if the instructions are not followed.

Payment to the Vendor for Services rendered shall not exceed the "Cost Plus Fixed Fee Not to Exceed Maximum Amount" unless an increase is approved in accordance with the contract with the Vendor. All invoices/bills must be submitted within 14 calendar days of the last date of services being performed for that invoice.

Direct expenses will not be paid in excess of that allowed by the Department for its own employees. Supporting documentation must be submitted, with the invoice/bill, for all billable expenses on the Project. The only hours that will be considered allowable charges for this contract are those that are directly attributable to the CE activities of this Project. Hours spent in administrative, clerical, or accounting roles for billing and support, are not considered allowable hours; there will be no reimbursement for these hours.

The use of overtime hours is not acceptable unless prior written approval is granted by the MDOT Region Engineer and the MDOT Project Engineer Manager. Reimbursement for overtime hours that are allowed will be limited to time spent on this project in excess of forty hours per person per week. Any variations to this rule should be included in the price proposal submitted by the vendor and must have prior approval by the MDOT Project Engineer Manager.